

IN THE CLAIMS

1. (Currently amended) A method of forming an isolation trench including a nitride liner in a semiconductor substrate, comprising:
 - ~~a first step of etching the substrate to form a trench therein;~~
 - ~~a second step of forming a conformal material layer on both sidewall and bottom of the trench, wherein the conformal material layer comprises a material selected from the group consisting of high temperature oxide (HTO), aluminum trioxide (Al_2O_3), and tantalum pentaoxide (Ta_2O_5);~~
 - ~~a third step of growing a thin thermal oxide layer between the conformal material layer and the substrate defining the trench through a thermal oxide process for preventing etch damage while etching the substrate;~~
 - ~~a fourth step of forming the nitride liner on the material layer; and~~
 - ~~a fifth step of using filling the trench with a trench isolation material to fill the trench.~~
2. (Cancelled)
3. (Currently amended) The method as claimed in claim 1 ~~or 2~~, wherein the conformal material layer is formed to a thickness of 50Å-400Å, and the thermal oxide layer is formed to a thickness of 20Å-150Å.
4. (Original) The method as claimed in claim 1, wherein the trench isolation material is made of high-density plasma (HDP) oxide or borophosphosilicate glass (BPSG) to a thickness of 3000Å-10000Å.
5. (Currently amended) A method of forming an isolation trench including a nitride liner in a semiconductor substrate, comprising:
 - etching the substrate to form a trench therein;
 - forming a thermal oxide layer on sidewalls and bottom of the trench;
 - forming a conformal material layer on the thermal oxide layer, wherein the material layer comprises a material selected from the group consisting of high temperature oxide (HTO), aluminum trioxide (Al_2O_3), and tantalum pentaoxide (Ta_2O_5);
 - ~~forming an impurity material diffusion barrier layer on both sidewalls and a bottom of~~

~~the trench, the barrier layer preventing impurity material penetration caused by formation of the nitride liner;~~

forming the nitride liner on the ~~barrier~~ conformal material layer; and
using forming a trench isolation material on the nitride liner to fill the trench.

6. (Cancelled)

7. (Currently amended) The method as claimed in claim ~~[[6]]~~5, wherein the conformal material layer is formed to a thickness of 50Å-400Å, and the thermal oxide layer is formed to a thickness of 20Å-150Å.

8. (Cancelled)

9. (Cancelled)

10. (New) The method of claim 1, wherein the conformal material layer is formed before growing the thermal oxide layer.

11. (New) The method of claim 1, wherein the HTO is formed at a temperature of 800°C.

12. (New) The method of claim 5, wherein the conformal material layer is formed after growing the thermal oxide layer.

13. (New) The method of claim 5, wherein the HTO is formed at a temperature of 800°C.